

A
Please insert new Claim 45 as follows:

45. (new) A process for preparing an isomorphically substituted zeolitic catalyst comprising the steps of: selecting an aluminosilicate zeolitic material selected from the group consisting of ZSM-5, ZSM-11, ZSM-12, ZSM-22, MCM-22, ZSM-23, ZSM-39, ZSM-57, mordenite, Beta, FAU, and L-types; and refluxing, in the presence of NH_4HF_2 , a slurry of the zeolitic material in the presence of a soluble metal compound selected from the group consisting of metal compounds of Fe, Ga, Ti, and Co and mixtures thereof under conditions effective for substituting aluminum in the aluminosilicate zeolitic material with metal from the soluble metal compound to yield a metal to aluminum ratio of between 1:10 and 3:1.

A
[Please insert new Claim 46 as follows.]

46. (new) A process for preparing an isomorphically substituted zeolitic catalyst comprising the steps of: selecting ZSM-5 aluminosilicate zeolitic material and refluxing, in the presence of NH_4HF_2 , a slurry of the zeolitic material in the presence of metal fluoride compounds under conditions effective for substituting aluminum in the aluminosilicate zeolitic material with metal from the soluble metal compound to yield a metal to aluminum ratio of between 1:10 and 3:1

A
[Please amend the claims as follows:]

1. A catalyst for methylating a naphthalenic feedstock, said catalyst comprising: a zeolitic material incorporating Al and one or more additional metals selected from the group consisting of Fe, Ga, Ti, and Co, and mixtures thereof, wherein the ratio of additional metal(s) is between about 1:10 and 2.5:1, and between 5 and 95 weight percent of a binder.

A
10. The catalyst of Claim 1 wherein the binder is selected from the group consisting of boehmite, alkali earth metals and SiO_2 .

A
14. The catalyst of Claim 1 wherein the weight percent of the noble metal is between 0.05 and 2.0 weight percent.

A
44. The catalyst of Claim 43 further including between about 0.05 and 2 weight percent of a noble metal selected from the group consisting of platinum, palladium or mixtures thereof deposited on the catalyst.